

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-30 are presently active in this case. The present Amendment amends adds Claims 21-30.

In the outstanding Office Action, Figs. 1 and 2 were objected to under M.P.E.P. § 608.02(g). Claims 1-20 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-3 of Kubica (U.S. Patent No. 6,694,230). Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pages (U.S. Patent No. 5,774,818) in view of Trikha (U.S. Patent No. 6,003,811).

In response to the objection to Figs. 1 and 2, submitted herewith is a Letter Submitting Replacement Sheets along with 1 Replacement Sheet for Figs. 1 and 2 adding the legend “prior art” to Figs. 1 and 2. The drawings are now believed to be compliant and no further objection on this basis is anticipated.

In response to the rejection under the judicially created doctrine of double patenting, Applicant herewith files a terminal disclaimer in compliance with 37 C.F.R. § 1.321 thereby overcoming the double patenting rejection of Claims 1-20. For the record, Applicant notes that the “filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither a presumption nor estoppel on the merits of the rejection.”¹

In response to the rejection of Claims 1-20 under U.S.C. § 103(a), Applicant respectfully requests reconsideration of the rejection and traverses the rejection as discussed next.

¹ Quad Environmental Technologies Corp. v. Union Sanitary District, 946 F.2d 870, 874, 20 USPQ2d 1392, 1394-5 (Fed. Cir. 1991).

IN THE DRAWINGS

The attached sheet of drawings includes changes to Figs. 1 and 2. This sheet, which includes Figs. 1 and 2, replaces the original sheet including Figs. 1 and 2.

Attachment: Replacement Sheet

Briefly recapitulating, Applicant's invention, as recited in Claim 1, relates to a system for operating an aircraft including: (1) a navigation computer with a first input configured to receive guidance instructions, a second input configured to receive guidance parameters, and an output configured to output automatic pilot instructions, and (2) a flight control computer with a first input configured to receive control instructions, a second input configured to receive the automatic pilot instructions, and a command generator configured to generate a first plurality of operating commands based on the automatic pilot instructions in an automatic pilot mode.

As explained in Applicant's specification at page 5, lines 6-25, and page 6, lines 1-7, Applicant's invention improves upon conventional systems, such as those illustrated in Figs. 1 and 2, because unlike these systems, which resort to both a navigation computer 9A and a control computer 9B to control the actuators 6 either directly, as in Fig. 1, or via a flight control computer 3, as in Fig. 2, Applicant's invention does not require a control computer 9B. The claimed invention thus leads to an improved system for operating an aircraft.² More specifically, it avoids the need to use a pair of control functions, a feature which can be associated with significant costs and duplicate validation of the control functions. Moreover, the invention makes it possible to reduce the delays between the inertial information and the operating commands given by the automatic pilot to the control surfaces.

The Office Action states on page 4 that the Pages patent teaches "a navigation computer 12 (fig. 4) and a flight control computer 13 (fig. 4)" and that the flight control comprises "a second input generator (connected to 12 (fig. 4)) to receive automatic pilot instructions (col. 5, lines 43-46); a command generator to generate a first plurality of operating commands based on the automatic pilot instructions." Applicant respectfully submits that the Pages patent does not teach these elements of Claim 1, and the means of

² See Applicant's specification at page 2, lines 12-20.

Claim 12. Component 13 of Fig. 4 in the Pages patent does not comprise “a second input configured to receive said automatic pilot instructions” because component 13 is itself the automatic piloting device. The Pages patent clearly states that the computer 12 only provides the automatic piloting device 13 with the position and next point to be reached, but it is the automatic piloting device 13 that is configured “to compute the instructions to be applied to the control surfaces as a function of the position and course of the aerodyne.”³ As such, component 13 cannot be a “flight control computer 13 (fig. 4)” comprising “a second input generator (connected to 12 (fig. 4)) to receive automatic pilot instructions,” as stated in the Office Action, since the Pages patent clearly establishes that component 13 does not receive, but rather itself computes the piloting instructions.

Accordingly, since the Pages patent does not teach all the limitations of independent Claims 1 and 12, and since the Trikha patent does not cure those deficiencies, the Pages and Trikha patents, whether taken alone or in combination, fail to teach or suggest every feature recited in Applicant's claims, so that Claims 1-20 are patentably distinct over the prior art. Accordingly, Applicant respectfully traverses, and requests reconsideration of, the rejection based on the Pages and Trikha patents.

Furthermore, Applicant respectfully disagrees with the alleged component analogies. In Fig. 4 of the Pages patent, “[t]he computer 12 is connected to the aerodyne’s automatic piloting device 13”⁴ and “[t]he automatic piloting device 13 is further connected to the navigational instruments 15 (...) and to the control surface actuators 14.”⁵ System component 13 in the Pages patent is an automatic piloting device and cannot be construed as the flight control computer of the claimed invention. The Pages patent discloses a system practically identical to the conventional system illustrated in Fig. 1 of Applicant’s

³ See the Pages patent at col. 5, lines 47-50.

⁴ See the Pages patent at col. 5, lines 43-44.

⁵ See the Pages patent at col. 5, lines 47-51.

specification and whose deficiencies the claimed invention corrects. More precisely, the terminal 11, computer 12, PA (French acronym for automatic pilot) 13, actuators 14, and navigation instruments 15 of Fig. 4 in the Pages patent are respectively analogous to the device 10, navigation computer 9A, control computer 9B, actuators 6, and lines 12 of Fig. 1 in Applicant's specification.

Applicant respectfully submits that the rejection of Claims 1-20 is overcome by the above discussion since the system components upon which the rejection of the Office Action is based have been shown not to be the same as the components of the claimed invention. Applicant respectfully submits that an assertion that the features of independent Claims 1 and 12 are taught by the Pages patent cannot be properly formulated using the cited components of the Pages patent.

As discussed above, the primary patent used in the 35 U.S.C. § 103(a) rejection is an embodiment of prior art which was specifically mentioned and illustrated in Applicant's specification and whose deficiencies the claimed invention corrects. For the reasons set forth above, the Trikha patent cannot be combined with the Pages patent as alleged since the cited system components of the Pages patent are not the components of the claimed invention. Therefore, for this additional reason, the Pages and Trikha patents, whether taken alone or in combination, fail to teach or suggest every feature recited in Applicant's claims, so that Claims 1-20 are patentably distinct over the prior art. Accordingly, Applicant respectfully traverses, and requests reconsideration of, the rejection based on the Pages and Trikha patents.

In order to vary the scope of protection recited in the claims, new Claims 21-30 are added. Claim 21 is similar to Claim 1 except that it specifies that a single control function is embedded in the flight control computer. This feature further establishes the claimed invention over the prior art. Specifically, conventional systems, such as that discussed in the

Pages patent and others similar to Figs. 1 and 2 of Applicant's specification, require more than one control function and possess the disadvantages associated thereto and cured by Applicant's invention. This feature finds non-limiting support in the disclosure as originally filed.⁶ Claims 22-30 depend from Claim 21 but are otherwise similar to Claims 2-11. Therefore, the new claims are not believed to raise a question of new matter.⁷

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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⁶ See page 3, lines 18-25, in Applicant's specification.

⁷ See MPEP 2163.06 stating that "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."